

ORDINANCE-O- 2009 - 87

A BILL FOR AN ORDINANCE REPEALING AND REENACTING CHAPTER 16.03
OF THE LONGMONT MUNICIPAL CODE, ADOPTING THE CITY OF
LONGMONT GREEN POINTS PROGRAM

THE COUNCIL OF THE CITY OF LONGMONT, COLORADO, ORDAINS:

The Longmont City Council finds:

- A. The citizens of Longmont, through the Longmont Home Rule Charter, have vested the Longmont city council with all the power of local self-government and home rule and all power possible for a city to have under the Constitution and laws of the State of Colorado, including the power to enact and provide for the enforcement of all ordinances necessary to protect life, health, and property; to declare, prevent and summarily abate and remove nuisances; and to preserve and enforce general welfare, order and security of the city and the inhabitants thereof.
- B. According to the Colorado Constitution, the Longmont Home Rule Charter and ordinances in local and municipal matters supersede conflicting state statutes within Longmont's territorial limits and other jurisdiction.
- C. Land-use regulation, including regulation of design, and construction of buildings, including all building systems and components, is a local and municipal matter.
- D. Adoption of the codes enumerated in this chapter is necessary to protect life, health, and property within the city; to prevent nuisances within the city; to preserve and enforce the general welfare, and to protect safety, order and security of the city and the inhabitants thereof.

Chapter 16.03 of the Longmont Municipal Code is hereby repealed and reenacted to read in part as follows:

16.03.110 Longmont Green Points Program Purpose

The purpose of the Green Points program is to encourage cost-effective and sustainable residential building methods, conservation of fossil fuels and other natural resources, recycling of construction materials, reducing solid waste and improved indoor air quality.

16.03.110 Building Permits - Green Points Required

Schedule for Green Points: To obtain a residential building permit for qualifying renovations, additions, or remodeling projects, the applicant must meet the green points requirements in Table 1.

Table 1
Points Required

Project Description	Thresholds	Points Required
Interior remodel	300 to 1,000 sq. ft. 1,001 to 1,800 sq. ft.	10 points 15 points
Additions	300 to 800 sq. ft.	25 points

16.03.120 Green Points Calculations Green points are calculated based on the following schedules.

A. Energy Code Measures. The International Energy Conservation Code (IECC) requires minimum measures of energy conservation for additions, renovations, or remodels. Green points are awarded in Table 2 for employing energy efficiency above the required minimums in each of the categories specified in the IECC. The applicant needs to complete an application form, available from the building official, and then calculate the green points awarded for each incremental increase above the IECC.

Table 2
Energy Code Measures/Green Points

Green Points	Green Points
Window Glass U-factor	Basement Insulation
U-0.32 1	R-13 1
U-0.31 2	R-15 2
U-0.29 4	R-19 3
U-0.26 or less 6	R-21 4
	R-24 or greater 5
Wall Insulation	Slab Insulation
R-22 1	R-11 1
R-24 2	R-12 2
R-26 3	R-13 3
R-28 or greater 4	R-15 4
Ceiling Insulation	Crawl Space Insulation
R-42 1	R-22 1
R-46 2	R-24 2
R-48 or greater 3	R-25 or greater 3
Floor Insulation over	Furnaces and Boilers
R-24 1	Furnaces
R-26 2	94% AFUE 2
R-28 or greater 3	98% AFUE 3
	Two Stage Furnace 5
Cantilever or Floor over outside	Air Conditioning
R-40 1	Evaporative cooler 2
R-42 2	14 SEER 2
R-44 or greater 3	16 SEER 4
	Two Stage A.C. 6

B. Use of Recycled Materials: Green points are awarded as follows:

1. Applicants can earn points by using recycled materials according to the following schedule:

- a. 2 points - recycled content carpeting
- b. 2 points - recycled plastic treated deck materials
- c. 3 points - recycled content, fiber cement or Forest Stewardship Council (FSC) certified siding
- d. 3 points - recycled content roofing

C. Framing: Green points are awarded as follows:

- 1. 3 points - modular or standard dimensioning
- 2. 5 points - structural alternatives to wood
- 3. 3 points - incorporate optimal value engineering (OVE) framing techniques
- 4. 2 points - oriented strand board in subfloors
- 5. 2 points - oriented strand board (OSB) or FSC certified plywood in wall sheathing
- 6. 2 points - finger-jointed or engineered studs used for wall framing
- 7. 5 points - FSC certified sustainably harvested lumber used for framing
- 8. Green points for using engineered lumber used in structural framing:

- 1 point - engineered roof trusses or wood “I” joists for rafters

- 1 point - wood “I” joists or floor framing

- 2 points - use engineered products to replace 2x10s and 2x12s in beams and headers

9. Green points for using structural insulated panels (SIPs) for exterior walls and roofs:

- 4 points - SIPs for exterior walls

- 4 points - SIPs for roofs

D. Plumbing: Green points are awarded as follows:

1. Green points for installations according to the following schedule:

5 points - one tankless water heater

3 points - each additional tankless hot water heater

2. 3 points - on-demand water switch

3. 1 point - for each dual flush water closet installed

4. 1 point - for each 25 feet of hot water pipe insulated

5. 1 point - for each heat trap installed on the water heater

E. Electrical: Green points are awarded as follows:

1. Green points for using installing compact fluorescent light (CFL) bulbs light fixtures according to the following schedule:

1 point - 6 CFL bulbs

2 points - 10 CFL bulbs

3 points - 16 CFL bulbs

5 points - 20 CFL bulbs

8 points – more than 25 CFL bulbs

2. Green points for installing an energy efficient dishwasher, clothes washer, refrigerator, or freezer. “Energy Efficient” appliance designation is indicated on the Department of Energy-required energy label. Standards are defined by the Energy Policy Act of 1992. Applicants can earn one point for each appliance up to a total of four points.

3. Green points for installing efficient light controls according to the following schedule:

1 point - 2 control devices

2 points - 4 control devices

4. 1 point - clothesline (where allowed by subdivision regulations)

F. Windows and Insulation: Green points are awarded as follows:

1. 2 points - no metal windows installed in basements

(replacement in remodels and additions only)

2. Green points for replacing single-pane windows (replacement in remodels and additions only) according to the minimum U values per the following schedule:

0.5 point/window - double-glazed (U-0.32)

1 point/window - double-glazed with low-e coating (U-0.30)

1.5 points/window - double-glazed with argon/heat mirror (U-0.28)

3. 2 points - wall insulation is 80% recycled material or wet spray insulation

4. 2 points - ceiling insulation is 80% recycled material or wet spray insulation

5. 2 points - install recycled content, formaldehyde-free fiberglass insulation

6. 3 points - existing ceiling insulated to R-40 or capacity for fixed space (remodels only)

7. 5 points - existing walls insulated to capacity or rigid insulation added to exterior (remodels only)

G. Heating, Ventilation, and Air Conditioning: Green points are awarded as follows:

1. 5 points - natural cooling

2. 2 points - attic fan

3. 3 points - hydronic baseboard heat

4. Green points for attaining an air infiltration rate below specified levels (natural air changes per hour – NACH - must be determined by an energy rater). The following schedule applies:

2 points: 0.30 NACH

4 points: 0.25 NACH

6 points: 0.20 NACH

8 points: less than 0.15 NACH

5. 2 points - whole-house fan. The fan must meet the

following: Minimum Fan Size cubic feet per minute (CFM) =
Volume of House x 4-5 air changes/hour x 1/60, Volume of house
= square footage of house x average ceiling height throughout
house.

6. 8 points – air-to-air heat exchanger (heat recovery ventilation)
7. 10 points - convert electric resistance heat-to-gas (additions and remodels only)
8. 4 points - replace electric water heater with a gas water heater (additions and remodels only).
9. 1 point - air de-stratification system
10. 6 points - evaporative cooling
11. 10 - 20 points for geo-thermal heating system installed

H. Solar: Green points are awarded as follows:

1. 10 points - solar hot water heating system installed
2. Green points for installing passive solar space heating according to the following schedule:

6 points - Glazing of the protected south wall surface adequate to provide passive solar heating for 20% of the building.

12 points - Glazing of the protected south wall surface adequate to provide passive solar heating for 40% of the building, but only if designed in conjunction with an appropriately sized thermal mass, so as not to affect adversely cooling loads.

20 points - Glazing of the protected south wall surface adequate to provide passive solar heating for 60% of the building, but only if designed in conjunction with an appropriately sized thermal mass so as not to affect adversely cooling loads.

3. 2 points - Active Solar Pre-piping
4. Green points for installing Active Solar Space Heating according to the following schedule:

8 points - 30 to 39% solar heating

12 points - 40 to 49% solar heating

16 points - 50 to 59% solar heating

20 points - 60% or greater solar heating

5. 20 points - solar-generated electricity

I. Indoor Air Quality and Interior Finishes: Green points are awarded as follows:

1. 3 points - Install infrastructure to support current or future alternative fuel vehicle use.

2. Green points for installing Sealed Combustion Gas Furnace/Boiler & Water Heater according to the following schedule:

5 points - one appliance

10 points - both appliances

5 points - separate room for appliances

3. 3 points - detached garage or exhaust fan on timer installed in attached garage

4. 1 point - low volatile organic compound (VOC) interior paint

5. 2 points - low solvent construction adhesives

6. 3 points - low-toxic, water-based wood and floor finishes used

7. 2 points - elimination of all particleboard inside envelope of the house

8. 2 points - elimination of all medium density fiberboard made with urea-formaldehyde

9. 2 points - all exposed particleboard and medium density fiberboard (MDF) sealed with three coats of low VOC, latex paint

10. 2 points – alternative, no-formaldehyde products substituted for particleboard

11. 5 points - install active radon mitigation system

J. Innovative Measures: Green points are awarded as follows:

1. New green products and techniques (measures) are continually introduced. This section is meant to accommodate added and improved green building measures.

2. Applicants can earn 20 points, plus a maximum of 20% of the total required points, for new green building measures. The chief building official will determine these points by considering the extent to which the measure is equal to or greater than the existing green point measure it replaces.

Note: Where points have been accumulated but have not been used on a specific project, those points may be used for future projects requiring Green Points when building or energy code requirements remained the same.